HAND GRIP DEVICE

BACKGROUND OF THE INVENTION

This invention relates to hand grips, more specifically, a hand grip device that allows a user to execute physical activities, such as weight lifting, physical therapy or carrying items, while relieving stress or pressure on the user's fingers.

Weight resistance training has become increasingly popular over the last several years. Fitness experts, celebrities and even the executive director of the President's Council on Physical Fitness and Sports have praised the benefits of weight resistance training as part of a healthy lifestyle. Not only can weight resistance training increase strength and muscle tone, but it can also increase heart and lung efficiency, increase flexibility, mobility and coordination, reduce the risk of high blood pressure, lower cholesterol level and provide an outlet from work or other stressful elements.

However, many people do not like to weight resistance train for several reasons. First, the free weight handle or stationary weight handle tends to rub against a person's hand and cause irritation. Second, when a person does use a free weight or stationary weight, his or her hand sweats onto the weight handle, thus causing the person to not have a secure grip on the handle. Third, many people do not wipe off the weight handle after using the weight, thus promoting unsanitary conditions. Thus,

more and more people are using gloves at health clubs and gyms in order to get a better grip on the weight handle and have a more sanitary workout.

However, there is yet one more problem relating to gripping weight handles: finger fatigue. In order to maximize the benefits of weight resistance training, enough weight must be lifted in order to cause the muscle to fatigue, but many people have difficultly reaching the muscle fatigue level because so much strain is placed on the fingers to grip the handle of the weight or due to physical infirmities, such as arthritis. The person must have a continuously secure grip on the handle of the weight in order to keep working the muscle. Once the person's fingers tire, he or she cannot lift the weight, therefore cannot work the muscle.

Currently, there are no devices designed to aid a person's grip without risking finger fatigue which are adjustable to accommodate a person's wrist size. Thus, a person must either squeeze into a device that is too small or wear a device that is too large and is uncomfortable to wear due to the device constantly shifting on the person's wrist.

Not only could the present invention be used during weight resistance training, but it could also be used for other activities in which a person must maintain a continuously secure grip on an item's handle, such as during physical therapy and carrying luggage, shopping bags, briefcases and the like. In addition, a person with

Carpal Tunnel Syndrome could use the device as a fixed wrist position is not required to use the device while performing activities.

Thus, a need exists for an adjustable hand grip device which does not promote finger fatigue.

The relevant prior art includes the following patents:

Patent No. (U.S. unless stated otherwise)	Inventor	Issue Date
4,487,412	Meeko	12-11-1984
5,298,001	Goodson	03-29-1994
4,807,876	Lothar	02-28-1989
3,541,990	Du Mas	11-24-1970
4,720,279	Fritschen *et al.*	01-19-1988
5,353,440	Meldeau	10-11-1994
5,685,809	Murray	11-11-1997
4,684,122	Desmond *et al.*	08-04-1987

Although the above patents teach various types of hand grip devices, none teach a hand grip device wherein an adjustable strap is wrapped around a wrist and attached to a rigid U-shaped device for stress relief of the fingers.

SUMMARY OF THE INVENTION

The primary object of the present invention is to provide a hand grip device that allows a user to engage in physical activities while relieving stress or pressure on the user's fingers.

A further object of the present invention is to provide a hand grip device that can adjust to accommodate various wrist sizes.

An even further object of the present invention is to provide a hand grip device that is easy to use.

A further object of the present invention is to provide a hand grip device that is durable.

An even further object of the present invention is to provide a hand grip device that is comfortable to use, even for a person with Carpal Tunnel Syndrome or other infirmities of the hand.

A further object of the present invention is to provide a hand grip device that can be placed on and off of a person without requiring the aid of others.

The present invention fulfills the above and other objects by providing a hand grip device comprised of two components: a grip member and an adjustable strap. The grip member is U-shaped so as to accommodate the handle of a weight and has an opening for the insertion of an adjustable strap. The grip member is made of a rigid

and durable material, preferably steel, so as to withstand large amounts of pressure without bending and is sized so as to be grasped within the palm and fingers of a user. The grip member is then covered, preferably with a layer of rubber treated with an antibacterial agent, so as to prevent the grip member from sliding along the handle and to promote sanitary conditions. The adjustable strap, preferably made of a heavy duty cotton material, feeds through a slot on the grip member and wraps around a wrist of the user. A fastening means, preferably hook and loop type fastening material, is located on a central and distal ends of the front of the strap while an adjuster, preferably similar to that of a buckle-type nature, is located on the proximal end of wrist strap.

To use the present invention, the user first feeds the adjustable strap through the grip member slot with the fastening means facing towards the adjuster and positions the hand grip device so the hand grip device is in between the adjuster and the central end fastening means. The user then places his or her hand over the grip member with the opening near the person's wrist and cups the grip member so his or her palm and fingers cover the grip member. Then, using the other hand, the user grasps the distal end of the strap, wraps it around the back of his or her wrist and feeds it through the adjuster. The user then pulls the strap to obtain the desired tightness. To secure the strap, the user simply presses the fastening means located on the distal end of the strap

to the corresponding fastening means located on the center of the strap. Now that the hand grip device is secured to the user, he or she can proceed to perform other activities, such as weight resistance training.

To use the device during weight resistance training or physical therapy, the user simply places the grip member around the handle of the weight and proceeds to exercise as usual. The user need not maintain a grip on the grip member as the pressure from the weight will be displaced from the fingers of the user to the wrist.

In an alternative method of use, the user could position the hand grip device so as the opening on the hand grip device is not against the user's wrist. In this position, the hand grip device and the palm portion of the user's hand act together to surround the handle of the weight.

If the person chooses to use the hand grip device to carry items with handles, the user simply places the handles into the cupped portion of the grip member.

The above and other objects, features and advantages of the present invention should become even more readily apparent to those skilled in the art upon a reading of the following detailed description in conjunction with the drawings wherein there is shown and described illustrative embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

In the following detailed description, reference will be made to the attached drawings in which:

FIG. 1 is a top view of the hand grip device of the present invention;

FIG. 2 is a side view of the grip member of the present invention;

FIG. 3 is top view of the strap of the present invention;

FIG. 4 is a side view of the hand grip device of the present invention in a first position;

FIG. 5 is a side view of the hand grip device of the present invention in a second position; and

FIG. 6 is a rear view of the embodiment of **FIG. 4**.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

For purposes of describing the preferred embodiment, the terminology used in reference to the numbered components in the drawings is as follows:

1. grip member
2. slot
3. strap
4. fastening means
5. adjuster
6. distal end of strap
7. proximal end of strap
8. central portion of strap
9. cupped portion
10. handle

11. wrist
12. finger
13. palm
14. hand grip device
15. strap front
16. strap back
17. first end of grip member
18. second end of grip member

With reference to **FIG. 1**, a top view of the hand grip device **14** of the present invention is shown. The hand grip device **14** has a grip member **1**, preferably made of steel and coated with an antibacterial plastic, having a first end **17** and second end **18** and a strap **3**, preferably made of a heavy duty cotton material, having a front **15** and a back **16**. The strap **3** feeds through a slot **2** located on the first end of grip member **17**. The strap front **15** has a fastening means **4** located thereon and an adjuster **5**, preferably that similar to a buckle, located on the end of the strap **3**.

With reference to **FIG. 2**, a side view of the grip member **1** of the present invention is shown. The grip member **1** is U-shaped wherein the first end of the grip member **17** is longer than the second end of the grip member **18**. The slot **2** is located along the longer end of the grip member **1**. The cupped portion **9** of the grip member **1** holds the handles of various items, including, but not limited to, handles for free weights, handles for weight machines, luggage handles, shopping bag handles, briefcase handles.

In **FIG. 3**, a top view of the strap **3** of the present invention is shown. The strap front **15** has two areas of fastening material **4** located thereon: the central portion **8** and the distal end **6**. An adjuster **5** is located on the proximal end of the strap **7**.

In **FIG. 4**, a side view of the hand grip device **14** of the present invention in a first position is shown. First, the user positions the hand grip device **14** so a first end of the grip member **17** is against the user's palm **13** and a second end of the grip member **18** is against the user's fingers **12**. Then, the user secures the strap **3** of the hand grip device **14** around his or her wrist **11** so, after feeding the strap **3** through the adjuster **5**, the distal end of the strap **6** overlaps onto the fastening means **4** on the strap front **15**. The grip member **1** is then placed over the handle **10** so as the cupped portion **9** of the grip member **1** is resting on the handle **10**. Although it is not necessary for the fingers **12** to wrap around the grip member **1** in order to use the device **14**, the user may find it more comfortable to do so while performing tasks.

With reference to **FIG. 5**, a side view of the hand grip device **14** of the present invention in a second position is shown. In this second use, the user positions the hand grip device **14** so the second end of the grip member **18** is against the user's palm **13** and the first end of the grip member **17** is against the user's fingers **12**. The palm **13** of the user's hand acts to surround the handle **10** of the weight so the user is able to exert more control over the hand grip device **14**.

Finally, with reference to **FIG. 6,** a rear view of the embodiment of **FIG. 4** is shown. After the strap **3** is fed through the adjuster **5**, the fastening means **4** on the strap **3** attach to one another to secure a tight fit around the user's wrist.

The use of the present invention will allow a person to execute physical activities, such as weight lifting, physical therapy or carrying items, while relieving stress or pressure on the user's fingers.

It is to be understood that while a certain form of the invention is illustrated, it is not to be limited to the specific form or arrangement of parts herein described and shown. It will be apparent to those skilled in the art that various changes may be made without departing from the scope of the invention and the invention is not be considered limited to what is shown and described in the specification and drawings.